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EMPYEMA.

Cases of Empyema, with Practical Remarks. By J. A. ALLEN, M.D. of Middlebury, Vermont.

[Communicated for the Boston Medical and Surgical Journal.—Continued from p. 15.]

CASE VIII.—Master Boardman, of Salisbury, aged two years and six months, had on the 1st of October, 1832, Rosalia *simplex*, from which he apparently recovered by the aid of mere nominal measures. In the course of two or three weeks, he became considerably anasarcous. His attendant physician administered calomel as a cathartic, and some diaphoretic powder. The bloating subsided, and there occurred pain in the left side of the thorax, accompanied with cough and difficult respiration, and febrile action. For this, an alterative course of medication, consisting of small portions of calomel with Dover's powder, was pursued for several days, and a blister or two was applied to the diseased side.

Nov. 15th.—I saw this patient in consultation. The anasarcous tumefaction is nearly gone. The urine has been diminished in quantity, but is now tolerably copious and clear; countenance pallid and sunken; bowels have been costive, now the motions are regular; pulse beat 120 per minute; respiration hurried and laborious; unable to lie on his right side; the left side is considerably larger than the right; the action of the heart is distinct and regular on the right side of the sternum. By auscultation, no respiratory murmur can be detected in any part of the left side of the thorax, and percussion elicits no resonance. The patient rests constantly with his right hand by the side of his head, and with the trunk of his body partially on his left side.

Mem.—Oxymel of squills two parts, Tincture of digitalis one part. Mix. Give as much of this as the stomach will bear, adding to each dose from five to ten drops of the tincture of cantharides every four hours. Mild tonics and diet, as circumstances may require.

Nov. 19th.—The patient died suddenly. No examination was made after death.

Remarks.—There is a doubt whether the accumulation in this instance was aqueous or purulent. If, however, reliance be placed upon the facts related, concerning the pain in the side and entonic action, it renders it probable that it was purulent matter. In either case, it affords an instance which illustrates the danger of neglecting an operation for empyema or hydro-thorax, notwithstanding the symptoms may not be urgent at the time, provided the symptoms which denote on accumulation of fluid within the cavity of one side of the thorax are clearly marked. Sudden death from effusions within the pericardium and within the cavities of the chest, are no rare occurrences. Several instances of this kind have fallen under my own observation. Recoveries, to be sure, do sometimes happen in cases of this kind without an operation. My fourth and fifth cases, as well as a case mentioned on the 217th page of the last volume, by Dr. C. Hooker, of New Haven, Conn. may be cited as instances of recovery without any external opening through the parietes of the chest. The events, however, of these cases, would afford poor precedents for neglecting the operation in cases of adults. Such is the recuperative power, during infancy, that at this period of life recovery often occurs in lesions, which at a more advanced period universally prove fatal. Brodie never saw a recovery from the *hip disease*, after the age of twenty-one years. Children often recover from this complaint.

Case IX.—John Sanford, of Cornwall, aged twenty-one years, was at Plattsburgh, N. Y., in the memorable battle of September 11th, 1814. For several days he endured much fatigue, and became greatly exhausted. In October following, he had a course of typhous fever. On the 6th of December after, he was attacked with pneumonia, for which he was several times bled. From this he partially recovered. During February and March after, he gradually became worse, so that by the first of April he was confined entirely to his bed, and obliged to rest wholly on his left side. The left side was enlarged, the ribs separated, and at one place the enlargement of the affected side was paralyzed; the heart beat on the right side, and his respiration was tedious. Under these circumstances a medical consultation was had, and a puncture was made into the prominent part; about a pint of pus was speedily discharged, when the orifice was for a time closed. At sundry times, the matter was allowed to escape, for four days, when, as nearly as could be calculated, four quarts had been evacuated. He was put on a course of bark and wine. He became relieved by the discharge, but he continued feeble, and from the orifice there was a constant discharge till June following, when an empiric ordered his chest to be syringed with a solution of corrosive sublimate. It was prepared according to the orders of the mountebank, by putting a *quantity* of corrosive sublimate into pure water, and when it was dissolved, was syringed into the side; and after it had remained in for a short time, was suffered to run out, and to be repeated every day. This plan was pursued for a week, when such an action was raised in his system, that his former attendant physician was called. An antiphlogistic course was adopted, which in a few days reduced the inflammatory action, and a copious secretion of pus ensued. Not long after this the orifice, through the parietes of the side, healed. There followed a cough, and a copious expectoration of matter, and at one time Mr. Sanford thinks he raised at least a pint of pure pus. The cough, however, gradually abated, expectoration became less, and in the course of two or three years he became a healthy man.

Nov. 8th, 1832.—Mr. Sanford has enjoyed good health since his recovery from empyema. He labored since on a farm, is not conscious of any shortness of breath. There is no perceptible falling in of the left side of the thorax. Indeed, by careful measurement, none can be discovered. With the stethoscope, no respiratory murmur can be detected in the lower portion of the left side of the chest; above the seventh rib, the respiratory murmur is distinct and loud. The action of the heart with the cylinder can distinctly be heard in every part of the left side of the thorax. No pectoriloquism can be detected in any part of this side.

Remarks.—It is the opinion of Mr. Sanford, and of his particular friends, as well as of the medical gentlemen who were familiarly acquainted with his case, that he owed his life entirely to the injection of the corrosive sublimate solution. It is evident that the stimulus of the injection produced a functional change of the affected parts, which resulted in the secretion of a better kind of pus, and consequently a more speedy closure of the aperture, and a subsequent restoration to sound health. It was unquestionably a valuable auxiliary in the event of the case.

The left lung in this instance was probably excavated by an abscess, and it may be it had a communication with the cavity of the chest, and gave vent to the matter which accumulated after the closure of the external outlet through the ribs. It is, also, to be presumed that the excavation has become adhered, and that a considerable portion of this lung from some cause is impervious to the air through the ramifications of the bronchiæ; and hence, we arrive at a ready explanation why there is no respiration to be heard in this portion of the lung; and hence, too, the reason why the action of the heart is so distinctly heard in every part of this side of the chest. That portion of the lung which is changed in structure, is evidently more compact than a healthy lung, and consequently communicates sound with more facility. On this account, the heart's action is rendered distinctly audible at a greater distance.

CASE X.—Horatio Williamson, aged 21 years, had not enjoyed good health for some time. In the summer of 1827, he experienced pain in his chest on the right side, which continued for several months. At length a fluctuating tumor made its appearance just below the right nipple, between the ribs. In December, the tumor became inflamed, and appeared on the point of bursting, when the late Dr. O. B. Norton punctured it. Something more than a quart of pus was discharged at this time. As the case was regarded hopeless, he was left without any remedial course being pointed out. His mother gave him freely of *syrups* and *beers* made of numerous kinds of vegetables. His health gradually improved. He coughed and raised freely, and the aperture through the parietes of his side continued opened and discharged between two and three years. He ultimately recovered sufficiently to perform manual labor, by which he now supports himself and family.

March 26th, 1833.—Mr. H. W. enjoys good health, although he is not stout. The right shoulder is depressed, and the right side of the thorax has fallen in very considerably. When he walks, he inclines his body much to the right side. By a careful examination with the stethoscope, no respiratory murmur can anywhere be discovered on the right side of the mediastinum; on the left, the respiratory murmur is clear and distinct. The heart beats regularly in its natural situation.

Remarks.—In this instance it is evident that life and health are sustained by the left lung. The right lung is probably destroyed by the ulcerative process, or else it is contracted, consolidated or hepatized, to such a degree as to destroy its functions. Otherwise, how can we account for the depression of the right shoulder, contraction of this side of the chest, and want of respiratory crepitus in this lung?

Although the event in this case was favorable, it affords a brilliant illustration of the disadvantages of neglected and appropriate application of remedial measures. In lieu of having the aperture in his side closed, and his health in a good degree restored, in two, three, or six months, as he evidently might have had, he endured between two and three years severe sufferings, anxiety and pain, under the gloomy apprehensions of the inevitably fatal character of his complaint. In addition to these, his expense in the loss of time *unnecessarily*, and the greater danger he hazarded of the loss of life *also*, from the want of suitable remedial means, are items of important consideration. To expedite a cure, as well as to perform a cure, is an important part of a physician's duty. Like the payment of a debt, the cure of a disease may be of as much consequence in relation to the *time when*, as the cure itself.

[To be continued.]

PHYSICS AND PHYSIOLOGY.

[Communicated for the Boston Medical and Surgical Journal.]

In examining the works of a human artist, however complicated, we ordinarily find ourselves able not only to determine the design which the whole was destined to accomplish, but to settle with satisfaction in our own minds in what manner each particular part contributes to the production of the end in question. Thus if we have before us a steam engine, we not only see that the ultimate design of the machinery is to produce motion of a particular kind in a lever or a wheel, but we can trace this design, and its gradual accomplishment, from the first production of the vapor to this ultimate result. If such a machine is successful, the cause of its success is evident and unequivocal. If imperfect, the source of its imperfection is the subject of accurate and conclusive experiment. If out of repair, worn or injured, the remedy is applied with mathematical certainty; and even if totally destroyed, it may be reconstructed by a skilful workman, from a careful examination of its disunited and now useless fragments.

But these principles, which are so constant in their application to the subjects of daily use that it may seem almost needless to put them into so imposing a form, these principles fail totally when we apply them to living animal and vegetable matter. We know that the grass grows, but by what superposition of parts, in what form, or by what kind of mechanical action, is matter of conjecture. We know that in the animal body certain functions are taking place, and by examining similar bodies we arrive very nearly at the structure of the organs to which these functions pertain; but the connection between these organs and their functions is not regulated by physical and mechanical laws, and in attempting to explain them by these laws, we are very liable to involve ourselves in a maze of contradiction. Still there is something so attractive to the philosopher in finding the Deity employing the same means and resources as those of human art, and to the religious man in discovering the evidences of design in his works by tracing out the pertinency of the apparent means and their fitness to the end proposed, that the wise in this world's lore, and the religiously disposed, have here made common cause, the former willing to show his devotion to the great interests of religion, and the latter eager to receive and embrace so good an advocate. Like other unnatural coalitions, this has not proved very successful; and the alliance between physics and physiology, has too evidently shown both of them in a distorted attitude. We may add that the physiologists have had the largest share in this work; the philosophers being led by their pursuits into more exact habits of reasoning, more mathematical trains of thought, have preferred declining to meddle with a subject to which they have found their science inapplicable. The pneumaticians have had little to say on the function of the lungs, the hydrostatic philosophers as little on that of the heart, and even the chemists have apparently found small attraction in analyzing the blood to obtain iron, or determining what was the precise change produced by this fluid in the atmospheric air. I notice that this reserve has been maintained even by medical men themselves, who were distinguished by their profound acquaintance with the exact sciences. Dr. Young, in his lectures before the London Institute, affords a remarkable instance of a physician discussing thoroughly physical subjects; and probably the volume in which these lectures are contained has been opened by many in the confident expectation that they should find the principles of mechanics, pneumatics, hydraulics and optics, freely and fully applied to the explanation of vital processes. Such curiosity must have been grievously disappointed on finding that the Doctor makes very little allusion to vital processes at all, that he scarcely introduces the structure of animals as a model or as an illustration of the arts, and that this structure is only referred to in a few scattered instances. In other writers on physics, even those of a popular character, scarce any reference will be found to animal structure or function, as illustrating these subjects.

But if we turn to the physiologists we shall find, that, from the time that physical science has been worthy of the name, they have been most assiduous in their efforts to enlist its services in behalf of their science.

The number and variety of the similes by which the action of the stomach has been illustrated, fully justifies the well-known witticism of Abernethy, who informed his class that this organ was neither a vat, nor a mill, nor anything else, except simply a stomach. The action of the air on the blood has been as great a problem in chemistry, as that of the heart on the same fluid has been in hydrostatics; and to show the indefiniteness of the results obtained by the calculations to which the latter question has led, it is sufficient to say that while by some the force of the heart's action has been made equal to eight ounces, by others it has been carried to 180,000 pounds. The attempt to determine the mechanical force which impels the venous blood, has been an especial favorite with these mechanicians; and in doing this, a degree of elastic force has been given to the heart sufficient to balance the whole weight of the blood contained at a given time in the veins, say about thirty pounds, together with all the frictions incident to the distribution of this quantity through a length of tube ten times at least as great as that of the human body—while direct experiment on the mere elasticity of the heart, when taken from the body and deprived of its vital power, will show that it scarce possesses any elastic force whatever.

But it is the locomotive apparatus which has most especially attracted those who delight to call in the aid of mechanics to illustrate vital processes. By making the muscles to represent cords; the limbs, or other parts to be moved, the weight; the joint, the fulcrum; and modifying this view according to the circumstances of each particular case, the whole apparatus of voluntary motion is made to come within the domain of the ordinary physical agents, and accordingly animal mechanics has been the theme for the display of much learning and ingenuity. The conclusions arrived at by viewing the subject in this light, though sufficiently well supported in themselves, do not to my mind convey much satisfaction. The muscles, considered as cords, almost all act at enormous disadvantage; their mode of action, by exchanging length for breadth, differs wholly from that of any mechanical forces applied to the arts; and the mode of action of the brain and nerves in communicating a primary impulse, renders the action of the muscles altogether peculiar.

The truth is that mechanics, as well as all other branches of physics, are so materially modified in their application to animal matter, by the introduction of the new element of life, that they no longer contain the character of exact sciences, and can no longer be subjected to rigid calculation. It is, I think, apparent to him who studies the complex structure of the human frame, that the Deity, in thus fearfully and wonderfully fashioning it, never intended to furnish models to human art; but that the principle of life, with which it everywhere teems, was intended to appear predominant over every other. That the spine is neither Doric, Ionic, nor Composite, in the order of its architecture, is not more true, than it is true that it has never furnished to architects a hint by which to rear the monuments of their skill. That the eyes are eyes, and not convex glasses, is the plain reason why practical optics owes little of its perfection to notions derived from their structure, and that the science, instead of being based on the phenomena presented by these organs, finds some of these phenomena contradictory to its best established conclusions. We cannot, with all our philosophy, tell why objects are seen erect when their images are inverted; nor, with all our science, tell why, if the muscles are actually cords, the tension should be felt to cease as soon as the requisite motion is accomplished. No—the structures on which the Deity has set the seal of life, and marked them as his own, are not to be measured by our square and rule. We are at liberty to watch and admire, and describe the functions of the living human structure; we can equally dissect and examine, and analyze the same structure when life has quitted the tenement: but to reason from the one to the other, to say that because this is so constructed, therefore it necessarily subserves such functions, and produces such phenomena, and no other—here it is that we go beyond our depth, and are obliged to acknowledge the inadequacy of our powers, and the limits which have been assigned to our knowledge. D.

Boston, February, 1834.

REMARKS ON THE OPERATION OF CUPPING, AND THE INSTRUMENTS BEST ADAPTED TO COUNTRY PRACTICE.

BY W. A. GILLESPIE, M.D. ELLISVILLE, VA.

[Communicated for the Boston Medical and Surgical Journal.]

In the 17th Number of the 9th Volume of your useful Journal, there is a reprint of "A Treatise on the Operation of Cupping, by Monson Hills, Cupper to Guy's Hospital;" in which he describes the instruments used by him, and his manner of performing the operation. My object, in making this communication, is not to write a review of the work; but to make a few observations as a sequel or substitute to part of the treatise, as well as to request some of your learned and talented readers and correspondents to write a practical essay for the Journal, on the subject of local bloodletting as a cure for disease.

The use of cupping instruments has been known from time immemorial; they are mentioned by Hippocrates and Celsus, as well as other ancient writers. No member of the profession, at this day, can be ignorant of their use and importance; but I fear there are some, who for want of proper instruments and manual skill in their use, too often omit their application, and rely on means in no wise as clearly indicated. In the present progressive and rapid march of medical science and improvement, morbid anatomy has revealed, and is still revealing, many of the once hidden mysteries of disease; and, hence, a more correct pathology and diagnosis have assigned "a local habitation and a name" to maladies formerly considered general, or rather incomprehensible. It is to this we are to attribute the increasing importance of local bloodletting as a therapeutical agent.

The general rules and observations of the author above named, are particularly good and applicable, and, I doubt not, were read with satisfaction and interest by many of your readers, particularly those (if such there be) who are destitute of expertness in the operation. There are many country practitioners, to my knowledge, who, for want of proper instruments and adroitness in using such as they may have procured, have abandoned, almost entirely, the practice of cupping, whilst they acknowledge at the same time the great utility of local depletion. Leeching has been used as a substitute by some; but the scarcity of leeches in the country, and the little attention paid to procuring, preserving and breeding them, has nearly excluded them also from practice, except in large towns.

I shall not attempt to offer a single remark on the utility of cupping, but shall confine myself to a few observations on the subject of instruments and their application, tending still more to simplify the operation and to adapt it to the convenience of all country practitioners.

Cucurbitulæ, or small gourds, were anciently used, and are still used by some, as well as cups of different kinds and materials. The common cases of cupping instruments, now in use, in this country, are sold at very high prices, and from their construction are liable to serious objections, particularly in country practice, from the inconvenience of carrying them about, and the difficulty and attention required in keeping them in good order, &c. A great superiority is claimed for them in consequence of the exhausting syringe adapted to the glasses; but whoever makes the experiment will find it inferior, in actual practice, to the old method of exhaustion by the torch. With respect to lessening the number of lancets in the common scarificator, as proposed by our author, experience had previously taught me its utility. I have frequently observed that more blood can be drawn from the incisions of five or six lancets than from a larger number, and I have frequently seen the blood flow as freely from a single incision made by a scalpel or spring lancet, as from fifteen or sixteen lancets in a common scarificator. Two or three incisions, made by a sharp scalpel or lancet across a fold of the cutis vera (held or pinched up by the left hand or by an assistant) deep enough, in common cases, to go through it, will answer as well as the best scarificator, and much better than a dull or rusty one. If the scarificator be used, great care should be constantly taken to have the lancets very smooth, sharp, and free from rust, otherwise disappointment will ensue on applying the glasses with the expectation of obtaining a free flow of blood. With respect to exhaustion of the glasses, by the torch, a very convenient and effectual method is, to take small pieces of what is called in the Southern States *pitch*, or *fat pine*, or small slips of any kind of porous wood steeped in spirits of turpentine and dried, varying in length to suit the depth of the glasses. One end of one of these may be lighted with a candle, and the other end being held between the thumb and forefinger of the left hand, should be placed on the skin about the centre of the incisions, perpendicularly to the skin or in the intended direction of the glass, which should be applied with the other hand, without loss of time, immediately over this little torch, with one edge of the glass resting on the skin until the air is nearly exhausted, when it should be entirely applied, without removing the torch, which will immediately cease to burn. The fire cannot touch or burn the patient, in consequence of the torch being longer than the diameter of the glass, on the side of which it will always rest until wholly extinguished. But as glasses are frequently broken in carrying them from place to place, an excellent substitute can be made of a small cow horn, cornicula, which may be scraped and polished until perfectly diaphanous or transparent. Several may be used of the capacities of from two to six oz. each. The torch may be used in the same manner with these, and they answer much better than glasses, which, generally, draw in too much of the surrounding integuments, and thus, by compression of the vessels, retard the bleeding. The torches may be conveniently prepared beforehand, and carried in one of the horns or glasses.

There is another method of exhausting the horn, which is practically much better than the torch or exhausting syringe, which last may be applied to it as well as to glasses. As it is not prevalent, I believe, to any extent in the profession, and as it may be thought by some to be void of cleanliness or decency, I shall here ask the indulgence of my more fastidious brethren, and offer as an apology that no man ought to practise physic who is not prepared to undergo any reproach or contumely not implicating his principles of honor or integrity, when his proceeding is designed for the good of his patient. I allude to exhausting the air by suction with the operator's mouth. A hole is to be made through the point of the cupping horn and stopped with common bees wax ; the wax being nearly of the shape of a vial cork, is to be perforated by a common pin into the cavity of the horn, which thus prepared is to be applied as soon as possible over the scarifications. The air is to be now exhausted by suction with the operator's mouth, and at the same time the teeth are to be clenched on the wax so as to close the perforation of the pin, and prevent the ingress of the air. A little practice will enable the operator to regulate, at his pleasure, the degree of suction required. I repeat it, that it is particularly important that the scarifications should be made with a sharp, clean instrument, and that the horn or glass should always be applied without loss of time, to prevent coagulation of the blood in the incisions, which will prevent its running.

A metal stop-cock can be applied to the horn, to answer the purpose of the wax and pin, or the exhausting syringe may be adapted to it ; or a thin piece of gum elastic may be confined over the perforation of the horn, which will admit of exhaustion, by suction, with the mouth. By this course, the torch, one cause of dread or alarm to the patient, is dispensed with.

An instrument resembling this, but of less use, cornicula, is described by Hildanus, Cent. 1, Obs. 80. "It is made of horn, almost in the form of a cupping glass, except at the more slender extremity there is a small perforation. The wide end is laid upon emaciated parts, and a person applying his mouth to the perforation at the small extremity, by suction draws out the air. In consequence of this, the part covered rises into the hollow of the instrument, and by this means the nutritious juices are thought to be invited to the emaciated part." Hildanus relates a cure performed by this means, and gives a figure of the instrument. Tulpius, Lib. 3, Obs. 49, gives another instance of a cure performed by this means.

The plan here recommended of cupping with the horn, if it has not the recommendation of neatness and show (which in most cases is not to be disregarded), has the more substantial one of superior utility and economy. It simplifies the operation and adapts it peculiarly to country practice, where, as a general thing, it is most needed, since the towns (and not the country) are supplied with cuppers and leechers by profession. It not only obviates the necessity of procuring expensive instruments for cupping, but also the inconvenience of carrying them about. It excites less dread in the mind of the patient than a formidable display of numerous and complicated instruments. This last is a matter of some consequence, as the cases requiring cupping are often serious, and a strong impression of fear and dread, made on the mind, may give perhaps a turn of the scale against the languishing patient. From the simplicity and little show of the plan and instruments here recommended, no such impression is likely to be made on the patient's mind. Any person of common dexterity may adapt horns to the use of cupping, and a sharp scalpel, razor or lancet, may be used to make the incisions ; and, however simple this plan may appear, I speak confidently and from the experience of several years, when I say that a certain amount of blood can be sooner and more easily procured, in this way, than with the most complicated and expensive instruments. I have had experience with the different instruments and modes of cupping, and am clearly of opinion, that with all who prefer utility and convenience, the horn must supersede them. This conviction is daily getting stronger, by experience, even with the most clamorous in favor of the syringe, glasses, &c. Some have already abandoned them, and now use the horn only. In making these statements, I am uninfluenced by anything but a desire to find and communicate truth to my brethren of the profession, who will, if they make the experiment, see for themselves the grounds for them. They are the results not only of my own, but of the experience of many others in this part of the country, and I hesitate not cordially to recommend the practice to others.

January 15, 1834.

EXPERIMENTS WITH OIL OF TANSY.

[Communicated by "W." for the Boston Medical and Surgical Journal.]

Newington, Conn. Feb. 4, 1834.

Dear Sir,—The following is an account of two experiments with the essential oil of Tansy.—A woman in New Haven had taken a large dose of it, either by mistake, or, as was suspected, for the purpose of producing abortion. Convulsions, supposed from the description given by those about her to be epileptic, followed, in which the shoulder was dislocated. The article is thought by unprofessional people to have the power of producing abortion, but with what foundation I know not. It had no such effect in this case, at all events. I determined to make some experiments on myself with it. Accordingly I procured some of the oil which had been long kept, and had a yellowish color, and tasted much as I should think oil of turpentine, in which tansy leaves had been macerated, would taste.* It was also quite thick. Began at five minutes before 9 in the evening of the 12th of March, with a dose of ten drops on sugar. No apparent effect following, I took, at ten minutes past 9, twenty gtts. more. Soon felt a slight glow in stomach, and a sensation approaching to a thrill through my whole frame. Pulse appeared to those who examined it to be fuller and more incompressible than before taking the medicine, but not more frequent. Half past 9, took fifteen drops, and in forty-five minutes took sixteen more. Slight exhilaration from some cause, and the eyes were rather too sensible to light. At 10, took seventeen drops; and at fifteen minutes past, took twenty drops more. Sensations were very little increased. Had two loose evacuations from the bowels, and feeling as though I should have more. Took at 11, ʒss. of paregoric, to prevent its disturbing me during the night. Felt rather more sleepy than usual at this time of the night. Slept well during the night, and felt as well as usual next morning, except feeling as though the abdomen was full of liquid secretion from taking a cathartic.

On the 13th procured some of the oil which was limpid and colorless, without the taste of turpentine. At eleven minutes before 11, took six drops on sugar. At 11, took eleven drops. Ten minutes past, took fifteen drops. At twenty minutes past, took 21 drops. Same sensations followed as were produced last night. Half past 11, took twenty drops more. At forty minutes, took forty-one more. Pulse now decidedly increased in force, and a little in frequency. Dizziness and confusion of mind. At fifty minutes past 11, took forty drops. At 12, forty more; and at fifteen minutes past, fifteen more, which was all I had. Whole quantity ʒij. or 209 drops. Dizziness and confusion of mind at this time very uncomfortable, and continued to increase, particularly the latter. The sensations were precisely the same as were caused by two ʒss. doses of camphor taken at an interval of half an hour; and had I not known what I had been taking, I should have said, without hesitation, that it was camphor. There was no pain, but some dizziness and unsteadiness of step, with a feeling which I cannot describe, but which was far worse than pain. I was utterly unable to fix my attention on anything, and it seemed as though the next instant of time my reason would leave me. About half past 1, some nausea and trembling, but no vomiting. The feeling of confusion increased till about 2, when it was stationary for about an hour and a half. I thought I would let it take its own course, as I wanted to see how it would act, and how long its effects would be going off. At 3, had a loose stool, and another about an hour after. Half past 3, the effect began to diminish, and gradually went off, but some of the same disagreeable feeling of confusion of mind was present at 11, when I went to bed. I did not sleep during its operation, but think I should have done so had I not been anxious about the result. During the operation my voice had a very strange sound to my ears. I was rather too much in a hurry to get through with this experiment, as in fact I generally have been in all my experiments, taking doses at too short intervals, before the effect of the preceding dose had time to be developed. I could perceive no effect on the urinary secretion, or upon any other except that of fluids of the alimentary canal. As the biliary secretion was healthy, there was no change apparent in it. There was no sweating, but I was most of the time in a cool atmosphere. Exhilarant or nervine, stimulant, narcotic, and cathartic effects were evident, and the narcotic part of its effect was, so far as I can judge, not only similar to but identical with that of camphor. The next day, March 14, I was perfectly free from disagreeable sensations, and as well as usual.

From these experiments, I am strongly disposed to think that this article is so near to camphor in its properties, that they might be used as substitutes for each other, except that this is cathartic. It possibly may possess other powers which would not be detected by an experiment on a healthy person. Rather less narcotic effect was produced on me by ʒij. of this article, than by ʒj. of camphor, which was so imperfectly pulverized that much of its effect must, I think, have been lost. I felt no appreciable effect from it for two hours, while, when well pulverized, its effect in a dose of fifteen grains was manifest in half an hour, and was very considerable. I expect it will be found that most people are more susceptible to the oil of tansy, in proportion to their susceptibility to camphor, than I am; at least, it is a common opinion among physicians and others, that it is far more active than my experiments would seem to indicate.

The oil I used in the last experiment was pronounced good by those who were acquainted with its physical properties; at any rate, it could only have been adulterated by an essential oil, as it was wholly soluble in alcohol. I know of no essential oil without decided sensible properties, but this tasted and smelt strongly of tansy, and only tansy. In the case of the woman mentioned, who was thrown into convulsions by it, the quantity taken was, according to her statement, quite small—much less than I took, but I do not recollect precisely how much. X+Z.

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PULMONARY CONSUMPTION.

Illustrations of Pulmonary Consumption, its Anatomical Characters, Causes, Symptoms and Treatment. By S. G. Morton, M.D.

This is the title of a new octavo of 183 pages, the author of which has enjoyed peculiar advantages, as physician to the Philadelphia Alms-House Hospital, for pursuing inquiries respecting consumptive complaints, and was imbued with both knowledge and spirit for the pursuit by an attendance on the clinical lectures of the celebrated and enthusiastic Laennec.

So much has been written on the subject of consumption, that it might seem to many a waste of time to prepare or peruse a new treatise upon it. But when we regard the almost universal fatality of the disease, unless arrested in its forming stage, and the fact that it constitutes the cause of about one-fifth part of all the deaths that occur in our country—certainly in our large cities—nothing touching the disease, its causes, symptoms or treatment, can be destitute of some degree of interest. What is first wanted in order to the more successful management of the disease, is, *a better knowledge of it.* It is by no means certain that this disease, as such, is necessarily fatal;—it is by no means certain that it is not yet to be found out, that our notions respecting it are erroneous in some important point; and when further light is shed on the nature of the malady, we may perhaps be shown some method of curing it. How has it been with respect to the croup? The croup has been regarded, in times past, almost as necessarily fatal as phthisis; it has been dreaded by parents scarcely less, and produced at its onset scarcely less hopelessness and dismay, than attends the settled flush of the confirmed victim of consumption. But it is not so now. By the steady course of medical inquiry and medical improvement, the nature of the disease has been more thoroughly developed—the erroneous views respecting it have been exposed and abandoned by the intelligent and enterprising of the profession, by those who are not enslaved to their prejudices or overawed by authority, and a new treatment, based on this newly-acquired light, has been adopted with signal and almost uniform success. Thus has a disease, so dreaded and resistless, been removed from its high place among fatal maladies, and ranked with such as are but seldom alarming, and still more rarely destructive to life. A few years ago, we should have supposed this change almost as improbable for croup as for pulmonary consumption, and the course of events respecting the former disease, should encourage us to hope for a like issue in the case before us; it should at least stimulate each of us to mark with closer attention every circumstance in the cases that come under our own notice, and to avail with earnestness of the observations of others.

In his anxiety to extend his knowledge of this disease, and communicate his discoveries to the public, it is to the credit of Dr. Morton, and to the credit of his book, that he has not pretended to have finished the work—he has not claimed to have exhausted the subject, or to have arrived at any *certainty* as to the best mode of treatment; but by patient and laborious research for a long series of years, he has collected and thus brought together important facts illustrating the anatomical characters of consumption at its several stages. The pathology of the disease, as well as its sources, peculiarities, and management, are discussed in a plain and practical manner, and the work, as a whole, must be considered as one further step taken towards that full understanding of this terrible malady, which it is so ardently hoped may ere long be attained.

Dr. Morton has illustrated the *pathological characters* of consumption by twelve plates, drawn and colored under his own eye from recent specimens. These plates convey very accurately and strikingly the expression of the organ, in its various states and stages of disease, and will enable others to compare their post-obit examinations with those of Dr. M. and test his views by their own observation.

Under the head of *treatment*, he first notices that which is most applicable to each of the prominent symptoms of disease, and then examines the merits of each of those articles of the materia medica that have been relied on with the greatest confidence. Under the same general head, are a few very judicious remarks on the effects produced on the complaint by diet, clothing, exercise, climate and sea-voyaging;—a bland but nutritious diet being considered more salutary in the disease, than starvation—free exposure, than confinement to a warm room—hardy exercise, than brooding indolence and effeminate indulgence—sailing on the sea, than traveling on land; and all and each, vastly more effectual than repeated bleeding, or perpetual blistering, or the most thorough and best regulated medication under opposite circumstances.

As to the benefits of exercise and exposure, the views of Dr. Parrish are already familiar to our readers. It will be seen by the following paragraph from the work before us, that the investigations of Dr. Morton have led him to the same result.

"We may feel the vicissitudes of temperature or not, according as we expose or protect the surface of the body: for under the latter circumstances there are but few days in the year in which the lungs, even in this climate, cannot bear the cold of winter without inconvenience. I therefore entirely coincide in the views of my friend and preceptor Dr. Parrish, that 'vigorous exercise, and free exposure to the air, are by far the most efficient remedies in pulmonary consumption. It is not, however, that kind of exercise usually prescribed for invalids—an occasional walk or ride in pleasant weather, with strict confinement in the intervals—from which much good is to be expected. Daily and long-continued riding on horseback, or in carriages over rough roads, is, perhaps, the best mode of exercise; but when this cannot be commanded, unremitted exertion, of almost any kind, in the open air, amounting even to labor, will be found highly beneficial. Nor should the weather be scrupulously studied. Though I would not advise a consumptive patient to expose himself recklessly to the severest inclemencies of the weather, I would nevertheless warn him against allowing the dread of taking cold to confine him on every occasion when the temperature may be low, or the skies overcast.'

There is great practical wisdom in the preceding directions; nor need they, in my view, any other qualification than a proper distinction between fatigue and exhaustion: it is only when the latter may repeatedly happen, or where an active fever may be present, or inflammation, or abscess, that injury is liable to follow;—exceptions, of which more will be said hereafter.

The once universal plan of confining the patient to his room, regulating the temperature by the thermometer, with bleeding, low diet, and perhaps mercurials as adjuvant remedies, has now become so far superseded by the more rational practice just mentioned, as scarcely to claim a refutation. I have seen it fairly tried, both in this country and in Europe, but never with success. It has not even the merit of keeping the disease at bay; for they who are so carefully guarded from all physical agents, feel the effects of them an hundred fold on a slight exposure. How can the patient recover or support his strength, when every avenue to it is closed?

On the contrary, every person of common observation must have noticed consumptive patients, who, by persevering in the active duties of life, have protracted their existence for years, and enjoyed a considerable degree of health and recreation.

I well recollect the instance of one of my patients, who, during a protracted hectic, over which tonics had no control, was supported to her carriage in a state of extreme debility, and after a drive of twenty minutes returned home seemingly more enfeebled than before. But, in a very few hours, the advantages became manifest; the plan was persisted in from day to day, and speedily resulted in a more than ordinary degree of health. This lady is now traveling in Europe, and is, as I am informed, entirely free from any symptoms of pulmonary disease.

Had this patient been permitted to remain in her chamber at the crisis above mentioned; had low diet and depletion been used to reduce the fever, I am entirely certain that her case would have long ago been hopeless.

To this extreme case (for such it really was) I might readily add many more, which, if not equally striking, are wholly corroborative of the practice I have adopted.

I therefore think we may adopt, as an aphorism in therapeutics, the language of the celebrated Dr. Rush, that "*The remedies for consumption must be sought for in those exercises and employments which give the greatest vigor to the constitution.*"

As to climate for consumptives. Dr. M. appears, very justly we think, to give the preference to that of the West Indies. From his remarks on the comparative salubrity of different sections of our own country, we offer the following extract.

"Experience has amply proved, that a mixture of sea and land air, such as exists on all our maritime situations, is unfavorable to delicate lungs; and especially where there is phthisis, or even a predisposition to it.

It has been supposed, however, that there are certain situations on our coast which form an exception to the above rule, and among them may be mentioned St. Augustine, in East Florida. The winter at this place is occasionally mild and equable throughout, and, under such circumstances, has afforded a decidedly beneficial retreat. But for one such winter I am informed that there are three which present a reversed picture. The late Dr. C. of this city was induced by his friends to pass the winter of 1829—1830 in St. Augustine. He had, when he left here, purulent expectoration, hæmoptysis and hectic fever. The winter proved of the most favorable character, and he returned home in the spring surprisingly improved in his general health. This fact induced not only himself, but many other invalids similarly affected, to pass the following winter, (1830—1831) at the same place. But, in lieu of the mild climate of the previous year, there was an almost constant prevalence of a damp, chilly north-east wind, so deleterious in its effects as to destroy many of the invalids collected there, and irreparably to shatter the feeble frames of others. Among tne latter was my friend, who survived his return but a few months.

With respect to the bay of St. Louis and the Passa Christiana, both on the Gulf of Mexico, Dr. Huntt informs us that the climate is not more salutary than at Sullivan's Island, or St. Augustine; yet he remarks, that 'Passa Christiana is liable to no variety of temperature—its atmosphere is warmed by the Gulf Stream, and is exempt by distance and the intervening forest from the cold air of the mountains.'

It seems necessary, therefore, to inquire what *inland* situations our country possesses, to which invalids may resort with a prospect of being benefited by the change.

Experience has amply proved that a dry air, in conjunction with the aroma of pine trees, is most congenial to delicate lungs. The ancients sent their consumptives to the pine forests of Egypt, which are described by Hippocrates as being dry and arid, yet refreshing to invalids.

I have myself repeatedly seen stubborn and almost inveterate catarrhs, which had resisted every mode of treatment, cured in a very few days by exchanging the city air for that of the pine region of New Jersey. It is not easy to give a satisfactory explanation of this fact; but it is too familiar to be doubted: and I think I have known coughs, that would have eventually induced consumption, radically cured by the change just mentioned. Thus also have I seen confirmed phthisis kept at bay, and its most distressing symptoms greatly mitigated.

But when it becomes advisable to combine a long journey with a change of air, the invalid cannot do better than direct his course from our Atlantic cities to the Western States, crossing the Alleganies, and travel through Ohio and Kentucky. If the autumn can be chosen, the excursion might be prolonged through Tennessee into Alabama, which is well known to afford one of the most genial and equable winter climates of this continent. On the approach of warm weather the invalid must return northward, in doing which he should avail himself of the sulphur springs in Virginia. These springs, three or four in number, are much varied in temperature and in chemical composition; and they are situated in a country of diversified natural features, and surprisingly equable temperature. Several of my patients who have visited this district, speak of it in terms of the highest commendation, as affording a delightful summer residence. How far bathing in these thermal waters may be of advantage in pulmonary affections, I have not been able to decide from personal observation; but Dr. Huntt adduces strong evidence in favor of the *red sulphur springs*, and relates some interesting cases.

The interior of South Carolina, Georgia, Mississippi and other extreme Southern States, have also been highly commended as winter residences for the consumptive."

The only other portion of this volume which our limits will allow us to present, is, the following case, which may excite hopes from sea-voyaging that will, we fear, be most generally disappointed.

"In the ship in which I sailed for Europe in 1820, was a lady in the last stage of consumption: she was conveyed on board in an exhausted condition, and her friends took, as they supposed, their final leave of her in this world. The voyage to Liverpool occupied something more than three weeks, during the whole of which time this lady suffered such violent sea-sickness, that some were apprehensive that she could not live to reach England. On the contrary, however, although in a most enfeebled condition on her arrival in that country, her health improved so rapidly that she was able at once to use exercise in the open air, and was so much benefited, that her original plan of passing the winter in Italy was abandoned. She remained a summer in England, and then returned to New York, where she enjoyed a comparatively renovated constitution for four years: but at the end of that period her malady made a final and fatal attack.

"This instance, which fell under my personal observation, and which presented as hopeless a train of symptoms as the mind can well imagine, made a strong impression on me, and convinced me that no case should be abandoned as hopeless so long as a sea-voyage remained untried."

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Whole number of deaths in Boston for the fortnight ending Feb. 14, 70. Males, 38—Females, 32.

Of infantile, 6—disease of the brain, 1—inflammation of the lungs, 4—scarlet fever, 3—convulsions, 6—hooping cough, 4—child-bed, 1—tumor, 1—old age, 2—consumption, 9—croup, 1—lung fever, 4—accidental, 1—hip complaint, 1—dropsy on the chest, 1—frozen, 1—apoplexy, 1—palsy, 1—throat distemper, 2—stricture of the œsophagus, 1—inflammation on the brain, 2—slow fever, 1—scrofula, 1—drowned, 2—dropsy, 2—intemperance, 1—abscess on the brain, 1—canker in the bowels, 1—typhus, 1—inflammation of the bowels, 1. Stillborn, 3.

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